

REMARKS

I. INTRODUCTION

Prior to a first Office Action in this application, Applicants request that claim 6 be canceled, claims 1, 3-5, 7, 8, 16-18, 23, 26, 27-29, 30, 33, and 37 be amended, and new claims 38-46 be added. These amendments and new claims do not involve any new matter or objectionable changes. When the Examiner takes this application up for action, he is requested to take the foregoing into account.

II. CLAIM AMENDMENTS

Applicants' attorney has made amendments to the claims as indicated above. These amendments were made solely for the purpose of clarifying the language of the claims, and were not required for purposes of patentability.

III. OFFICE ACTION DOUBLE PATENTING REJECTION

On page (18), the Final Office Action provisionally rejected claims 1, 2, 5, 6, 7, 10, 12, 13, 14, 15, 23, 24, 27, 28, 29, 32, 34, 35, 36, and 37 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 4, 5, 6, 7, 8, 9, 10, 11, 12, 19, 22, 23, 24, 25, 26, 27, 28, 29, and 30, respectively, of co-pending Application No. 10/068,039.

The Applicants will file a terminal disclaimer obviating this rejection, once patentable subject matter has been identified.

IV. ARGUMENTS

The Applicants have amended the claims to more specifically describe the non-coherency of the layered modulation signal.

The Final Office Action appeared to argue that one of ordinary skill in the art would be motivated to substitute Anderson's demodulator (which can selectably receive either non-coherent signals or coherent signals, but not both at the same time) for Ishio's demodulator (which discloses coherently layered signals), thereby disclosing a "non-coherent layered modulation signal".

The claims have been amended and new claims added to clarify that “non-coherence” of the Applicants’ layered modulation signal lies in the non-coherent relationship between the upper and lower signal layers, not the non-coherence of either one or both of the signal layers by themselves (like the non-coherent FSK HART signals of the Anderson reference). Indeed, even though the Applicants’ invention is directed to non-coherence between the upper and lower layer signals, it is typically practiced in embodiments wherein both the upper layer signal and the lower layer signal *are* themselves coherently modulated, but not coherent with each other. Accordingly, even if Ishio were modified as suggested, the result would still fail to teach the Applicants’ invention.

The new claims further recite that the non-coherently modulated layers are used to compatibly transmit legacy data to legacy receivers, while transmitting legacy data and non legacy data (which adds to or enhances the legacy data) to non legacy receivers. All the known prior art disclose systems that use layered modulation to increase transmission throughput to non-legacy receivers, while retaining compatibility with legacy receivers do so with *coherently* layered signals. The use of *non-coherently* layered signals of the Applicants’ invention permits the use of separate transmitters to independently transmit each layer of even transmitters using different modulation and coding schemes. Such capabilities are unknown in the prior art.

V. CONCLUSION


It is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicants' undersigned attorney.

Respectfully submitted,

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